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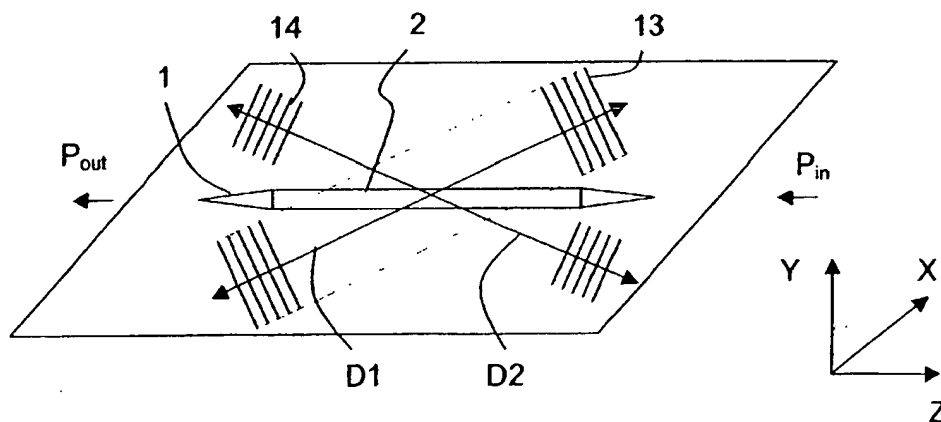
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- (71) Applicant (for all designated States except US): **AVANEX CORPORATION** [US/US]; 40919 Encyclopedia Circle, Fremont, CA 94538 (US).
- (72) Inventors; and
(75) Inventors/Applicants (for US only): **DAGENS, Beatrice** [FR/FR]; 20 rue Fondouze, F-92160 Antony (FR). **BRENOT, Romain** [FR/FR]; 70 rue du Faubourg St Martin, F-75010 Paris (FR). **DUAN, Guang-Hua** [FR/FR]; 31, rue Chateaubriand, F-92290 Chatenay Malabry (FR). **HESSLER, Thierry** [CH/CH]; c/o Ecole Polytechnique Federale de Lausanne, Institut De Micro-Et Optoelectronique, CH-1015 Lausanne (CH).
- (74) Agent: **HAINES, Miles, John**; D Young & Co, 21 New Fetter Lane, London EC4A 1DA (GB).
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(54) Title: SEMICONDUCTOR OPTICAL AMPLIFIER WITH LATERAL AND DISTRIBUTED GAIN STABILISATION



(57) Abstract: A stabilised gain semiconductor optical amplifier (CG-SOA) includes an active waveguide (1) comprising an amplification medium (2), extending in longitudinal (Z), lateral (X) and vertical (Y) directions, and coupled to a laser oscillation structure comprising at least two resonant cavities (13, 14) extending in first (D1) and second (D2) directions which are different from the longitudinal direction (Z) of the active waveguide (1) and arranged in such a way as to permit the establishment of laser oscillations having at least two different relaxation oscillation frequencies.

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